GOOSE FARM
NEW JERSEY
EPA ID# NJD980530109

EPA REGION 2
CONGRESSIONAL DIST. 4
Ocean County
Plumsted Township

Site Description

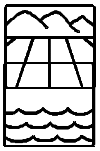
The 1 ½-acre Goose Farm site was used as a hazardous waste disposal area from the mid-1940s to the mid-1970s by a manufacturer of polysulfide rubber and solid rocket fuel propellant. The majority of wastes were dumped into a pit dug through fine sand. Waste chemicals from laboratories, drums, and bulk liquids were dumped into the pit. In 1980, the New Jersey Department of Environmental Protection (NJDEP) found that a contaminant plume that originated in the waste pit area had migrated north in the groundwater toward a nearby stream. Also, soil was found to contain volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs). Approximately 1,000 residences are located within a 1-mile radius of the Goose Farm site. An unnamed stream on the site flows into Lahaway Creek, a tributary of the Delaware River, which is used for recreational activities. The site is adjacent to a forested area..

Site Responsibility:

This site is being addressed through Federal, State, and potentially responsible party actions.

NPL LISTING HISTORY
Proposed Date: 10/01/81
Final Date: 09/01/83

Threats and Contaminants



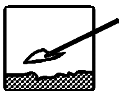
Groundwater is currently contaminated with VOCs and SVOCs. Heavily contaminated soils within the original waste pit have been excavated, however, residual VOC and SVOC contaminants still remain. Surficial soils are contaminant free. The unnamed stream that flows into Lahaway Creek is contaminated with low levels of methylene chloride, benzene and toluene. Leachate from the pit contained various VOCs; however, drums containing contaminants were removed and there is no longer any leachate from the waste pit. Although surface water is not used as a source of drinking water, it is used

for irrigation of food crops. Contaminants may accumulate in the food and pose a health hazard if eaten. The surface water is used for recreational purposes and may be harmful if accidentally ingested. Wildlife in the area may be affected by the pollutants. People who come into contact with the contaminated groundwater may suffer adverse health effects.

Cleanup Approach

This site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status



Immediate Actions: In September 1980, the NJDEP installed and operated a groundwater recovery, treatment and spray irrigation system. This groundwater treatment system operated for seven months, until March 1981, and treated approximately 7.8 million gallons of contaminated water. In addition, approximately 5,000 containers (drums, lab packs and pails) holding 9,000 gallons of bulked liquid waste were removed from the waste pit and disposed of off site in a federally approved facility. A final component of NJDEP's cleanup activities included the removal of contaminated soil. Approximately 3,500 tons of grossly contaminated soil and an additional 12 drums of PCB waste also were disposed of off-site. These early cleanup actions taken by the NJDEP minimized the more imminent public health and environmental risks associated with the site.

Entire Site: In 1985, the EPA selected a remedy to clean up the site that includes recovery and treatment of contaminated groundwater and flushing the soil with the treated effluent, in conjunction with evaluating the need to cap the site, and testing the soil for PCB contamination. After entering into a judicial consent decree in 1988 with EPA and NJDEP to implement the selected remedy, a responsible party, Morton International Inc. (a Rohm & Haas Company) excavated PCB-contaminated soils in 1989, and constructed a slurry wall and a groundwater remediation system. Start-up of the groundwater remediation system occurred in June 1993.

Site Facts: In 1988, a responsible party, Morton International, Inc., agreed to implement the selected remedy to clean up the site under a Consent Decree with EPA, NJDEP and the U.S. Department of Justice.

Environmental Progress

Removing the liquid and solid hazardous wastes and installing the preliminary groundwater treatment system have greatly reduced the potential for exposure to contaminants at the Goose Farm site while final cleanup activities are taking place. Remedial construction activities were completed in June 1993, and the groundwater treatment system started operation subsequently. Groundwater recovery and treatment operations were suspended, however, during December 1993 due to iron and biological

fouling of the air stripping packing.

To address the iron fouling problem of the treatment plant, design modifications were proposed that included a pre-treatment process designed to handle and remove the high iron and solids loading in the influent to the plant. The pre-treatment system was constructed in August 1994 and the plant resumed pumping and treatment operations in October 1994. On the average, 2.5 million gallons of contaminated groundwater are pumped and treated every month at the site, with an average flow rate of 75 gallons per minute. To date, approximately 200 million gallons of contaminated water have been treated at the site.

In November 1996, EPA determined that a small portion of the contamination plume underlying the site was migrating in an uncontrolled manner due to the appearance of contaminants in a previously uncontaminated area. To regain hydraulic control of the groundwater plume, EPA approved of re-routing treated water for discharge to trenches outside the slurry wall. This alteration allowed for hydraulic control of the groundwater contamination. In February 1998, EPA approved reintroduction of a limited amount of treated water to flush the soil within the slurry wall. Soil flushing within the slurry wall was initiated at five (5) gallons per minute (gpm) in April 1998. The soil flushing rate was increased to fifteen (15) gpm in November 2001 and Morton is currently maintaining hydraulic control of the groundwater plume at the site under these conditions.

In February 1998, EPA, along with NJDEP and Plumstead Township approved an air stack modification. This modification required Morton International Inc. to extend the stack by twenty-four (24) feet to allow for emissions discharge without the use of a thermal oxidizer. Based on the reduction in the level of contamination in the groundwater influent over time, an increase in air stack height allows emissions to meet all air discharge permit requirements. In addition, operational problems and system damage that have been associated with the use of the thermal oxidizer in the past will be avoided.

All data collected from the treatment system to date show compliance with cleanup objectives and current efforts at the site are concentrated on optimizing the recovery/treatment/infiltration process.

Five-Year Review

Pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, EPA completed a five-year review September 1998 to ensure that remedial actions selected at the site remain protective of the public health and the environment. The five- year review found that the selected remedy, as implemented at the site to date, continues to be protective of human health and the environment.